CONTRACTORS and ENGINEERS *Magazine*

INDEX TO ARTICLES

January to December, 1963 (Volume 60)

BUTTENHEIM PUBLISHING CORPORATION • 757 THIRD AVENUE, NEW YORK, N.Y. 10017

CLASSIFICATION OF ARTICLES

Airports and Bases
Bridges
Building Construction
Conventions
Dams, Powerhouses and Flood Control
Dealers, Equipment
Dredging
Earthmoving
Engineering and Design
General
Highways
Maintenance
Management
Paving, Bituminous
Paving, Concrete
Pipelines
Prestressed and Precast Concrete
Tunnels

REGULAR MONTHLY FEATURES

Avoid Legal Pitfalls
Bookshelf
Business Comment
Construction Camera
Convention Calendar
Distributor Doings
Editorial
Foreign Projects
Industry Trends
Labor Review
Manufacturer Memos
Names in the News
Product Literature
Product Parade
Surveying Washington
Tricks of the Trade

AIRPORTS & BASES

Hot-mix resurfacing beefs up AFB runway (Elmendorf, Anchorage, Alas.)--Feb., p. 38
Conveyor and tremie system places missile-silo concrete (Davis-Monthan AFB-Tucson, Ariz.)--Feb., p. 122
Big Hangar doors are moved intact--Mar., p. 18
Work starts on first Alaska job using CPM (Elmendorf AFB)--July p. 71
Rocket test-stand job demands CPM scheduling--Aug., p 12

BRIDGES

Crane mobility rates high for bridge jobs--Feb., p 46
Mobile platforms will set big precast bridge piers--Mar , p 22
Plastic forms make gains--Mar., p. 40
Arches in two directions mean forming problems--Apr., p 86
Hydraulic clamp protects cylinder piles--May p 20
Slip-form machines costs bridge piles--May, p. 32
Unusual bridge design has small central stringer carried on cross frames--May, p. 52
Spinning at the Narrows--June p. 42
Safety at the Narrows--June p. 80
Yugoslav engineers use variety of structures to tie country together with bridges--July, p 24
Big square piles win out--July, p. 90
Two special forms mass-produce deck sections--Aug., p. 58
Big resurfacing job handled with epoxy cement--Sept , p. 22
Forms give texture to bridge columns--Sept., p. 62
Hinged to fixed arch in four easy steps--Oct., p. 68
Plant at river s edge speeds pier construction--Oct., p 96
Bridge decks built to last--Nov., p. 64

BUILDING CONSTRUCTION

Pre-glazed concrete panels cut exterior-wall costs--Jan., p. 80
Prefabricated forms build 5 homes daily (San Juan, Puerto Rico)--Feb., p. 26
Innsbruck builds for IXth Olympic games--Feb., p 60
Shells form sunshade for new medical center--Feb p. 128
Forms are moved in big sections--Mar., p. 44
Building construction spurts in Anchorage--Mar., p. 76
A shoring system to save money--Apr., p. 70
Tower cranes, ganged forming mark Puerto Rico's building boom--May, p. 44
HP shells to cover Puerto Rican stadium--May, p. 116
Wire mesh improves work on flat slabs--June p. 66
Collapsible mobile forms save time and cut costs--June, p. 78
Architectural concrete--and safety--demands good forming--June, p. 88
Spectacular shapes rise at World s Fair--July, p. 10
Skill and care are big considerations in sandblast finishing--July p. 34
Columns, floors, roof, walls are pre-stressed in tall building--Aug., p. 24
Russia treats soils and building materials with direct current--Aug., p. 75
Rubber tubes form voids in prestressed slabs--Aug., p. 78
Precast roof and wall units speed construction of shopping center--Sept., p. 46
Production and safety stressed on big apartment job--Oct., p. 52
The World - in stainless steel--Nov., p.40
Glass-fiber forms for fascia beams--Dec., p. 36

CONVENTIONS

AASHO s 48th: problems to study--Jan., p. 66
Industry-wide gathering this month in Chicago--Feb., p. 44
Researchers find some answers at HRB's 42nd annual meeting--Feb., p. 144
Road show boosts attendance at four national conventions--Apr., p 40
AGC ponders these problems; excess capacity; intense competition; low profits high business failure rates--Apr., p. 64
Britain stages outdoor equipment exhibition--Sept., p. 12
European conferences discuss construction and engineering--Oct., p. 102
Quality the keynote of PCI meet--Dec., p. 56b

DAMS, POWERHOUSES AND FLOOD CONTROL

Underground power plants under way in Yugoslavia--Jan., p. 16
Ammonium nitrate blasts dam tunnels--Jan., p. 46
Computers aid in arch dam design--Jan., p. 88
Vibratory hammer doubles pile-driving production--Feb., p. 16
Small pin lifts big rock--Feb., p. 40
Big spread of new rigs works on dam--Feb., p. 52
Twin Buttes Dam: a year ahead of schedule--Feb., p. 74
Checkerboard seawall saves beaches--Feb., p. 132
Two earth dams ready Costa Rica for industry growth--Mar., p. 48
American rigs move earth for Indus Basin project--May, p. 94
Bog loader saves 15 per cent on rock-moving cost for dam--Sept., p. 30
Service islands keep haul rigs barreling on huge dam project--Oct., p.31
San Luis dam an earthmoving show--Oct., p. 58
Huge cement-transfer job for dam handled by air--Nov., p. 60
Mass concrete-design and construction--Nov., p. 68
Power on the line from Glen Canyon--Dec., p. 12

DEALERS, EQUIPMENT

Peterson puts it on the line (Peterson Tractor Co., San Leandro, Calif.)--June, p. 49

EARTHMOVING

A better way to pay-rate scrapers--Jan.--p. 84
Big spread of new rigs works on dam--Feb., p. 52
Twin Buttes Dam: a year ahead of schedule--Feb., p. 74
Scrapers move rock for profit--Apr., p.36
Rock barged 351 miles to jetty--May, p.38
Diagram the dirt for more accurate estimating for better field supervision--May, p. 92
American rigs move the earth for Indus Basin project--May, p. 94
Work starts on first Alaska job using CPM (Elmendorf AFB)--July, p. 71
Vibrating sheepsfoot gets deep compaction--Aug., p. 46
Ingenious shield works with specially equipped backhoe--Sept., p. 24
Tractor shovel handles heavy rock excavation--Oct., p. 16
San Luis Dam an earthmoving show--Oct., p. 58
Excavation volume up five times, labor cost cut 40% on harbor project (Genoa, Italy)--Oct., p. 91
Earthmoving supervision - from a helicopter--Nov., p. 20
Loaders and clamshells teamed for narrow trench excavation--Nov., p. 48
Inclined plane will lift boats in Belgian waterway--Dec., p. 40

ENGINEERING AND DESIGN

Pre-glazed concrete panels cut exterior-wall costs--Jan., p. 80
Computers aid in arch dam design--Jan, p. 88
Shells form sunshade for new medical center--Feb., p. 128
Mobile platforms will set big precast bridge piers--Mar., p. 22
Aerial photographs, survey with tellurometer open wilderness road--Apr., p. 72
Arches in two directions mean forming problems--Apr., p. 86
The St. Louis Gateway Arch--May, p. 10
Unusual bridge design has small central stringer carried on cross frames--May, p. 52
Italian institute tests models for structures--May, p. 86
Spectacular shapes rise at World's Fair--July, p. 10
Skill and care are big considerations in sandblast finishing--July, p. 34
Big square piles win out--July, p. 90
Miami firm finds no difficulty in producing 36-inch piles--July, p. 106
Hinged to fixed arch in four easy steps--Oct., p. 68

ENGINEERING AND DESIGN (cont.)

Mass concrete-design and construction--Nov., p. 68
Inclined plane will lift boats in Belgian waterway--Dec., p. 40

GENERAL

Forming for concrete: Part I - Modular panel systems form walls and slabs--Jan., p. 30
Special reference section for Product Literature--Jan. p. 56
Forming for concrete: Part II - Paper and plastics for voided slabs--Feb., p. 62
Giant earthmover joins archeological expedition--Feb., p. 66
Construction men in the Peace Corps--Feb., p. 84
Underwater TV eliminates excavation job--Feb., p. 90
Tractor trains take tough sled road to remote Alaskan site--Feb., p. 146
Forming for concrete: Part III - New shoring systems provide many options--Mar., p. 120
World's largest radar a fantastic construction job--Apr., p. 24
Lilyan Altman: A young woman in a man's world--Apr., p. 48
1963 Show exhibits in print--Apr., p. 91
Forming for concrete: Part IV - Shell structures challenge form builders ingenuity--Apr., p. 136
The St. Louis Gateway Arch--May, p. 10
Forming for concrete: Part V - Specific applications demand special forms--May, p. 100
1963 Profit Reports--June, p. 21
Forming for concrete: Part VI - Architectural concrete - and safety - demands good forming--June, p. 88
Tires for construction - Part 1 --June, p. 100
Tires for construction - Part II--July, p. 96
Communications antenna is founded on permafrost--July, p. 109
Helicopters play a key role on aerial-tramway job--Aug., p. 34
Accent on youth sparks road work in Yugoslavia--Aug., p. 44
Big scrapers start new widening job on Panama Canal--Aug., p. 70
Tires for construction--Part III--Aug., p. 97
Canada's steel industries pool help for 1967 fair--Sept., p. 7
Erosion board fights to save beaches--Oct., p. 44
Side-dumping wheel loader scores a bulls-eye--Oct., p. 100
Four culvert pipes nine feet in diameter are jacked into place--Nov., p. 26
Ancient island quarries supply centuries-old stone industry--Nov., p. 89
Power on the line from Glen Canyon--Dec., p. 12

HIGHWAYS

Tilting mixers eliminate batch trucks and pavers--Feb., p. 28
Colorado department charts working days--Feb., p. 130
Italy builds superhighways--Mar., p. 12
Careful blasting takes sidehill cuts near buildings (Puerto Rico)--Mar. p. 30
Tall forms for high wall--Mar., p. 34
Single compactor handles subbase in 13-inch lifts--Mar., p. 79
New secondary roads serve primitive areas (Panama)--Mar., p. 114
Yugoslavia is building cross-Europe highways--Apr., p. 44
Aerial photographs, Tellurometer survey open wilderness road--Apr., p. 72
Plant mixes soil-cement for shoulders--Apr., p. 142
Rocky road to Gettysburg--May, p. 50
Diagram the dirt for more accurate estimating, better field supervision--May, p. 92
Steel-pipe underdrains stabilize depressed highway--May, p. 112
Austria constructs 4 and 6-lane highways--June p. 12
Cement-treated base-at 500 tons per hour-July, p. 50
Road through swamp - built in the dry--Sept., p. 42

HIGHWAYS (cont.)

Loaders, scrapers team to build freeway grade--Sept., p. 52
Motorized spreader to meet tough spex--Sept., p. 66
Tractor shovel handles heavy rock excavation--Oct., p. 16
Unusually tough rock tests contractor's skill--Nov., p. 28
Light metal forms are used for girder soffits and chamfers--Dec., p. 26
Stabilized base 5 inches thick bridges poor subsoil--Dec., p. 46

MAINTENANCE

Oregon contractors do-it-yourself plan--Jan., p. 63
Safety tips for portable heaters--Jan., p. 65
Always treat gasoline with great respect!--Jan., p. 65
A manufacturer's plan of scheduled checkups--Feb., p. 69
Monthly get-togethers for maintenance men--Feb., p. 69
How does your PM program check out with this one?--Mar., p. 53
California contractor claims cleanliness is efficiency - and he s got the proof--Apr., p. 57
Summerizing rigs is good PM and PR--May, p. 61
Here are useful tips on radiator fan maintenance--May, p. 64
Peterson puts it on the line--June, p. 49
Custom-built lube truck...on-site mobile service station--June, p. 52
Lubrication for hot-mix spreads: keep it simple--June, p. 54
"Keep 'em running" is this contractor's motto--July, p. 55
Field service truck has solvent drawer that does double duty--July, p. 56
Safety is by-product of good maintenance--July, p. 57
PM begins at the top--Aug., p. 63
Perini solves the PM problem--Sept., p. 75
How to eliminate unnecessary wear on clutch faces--Sept., p. 81
Men make the program go--Oct., p. 34
Lubrication key to long service from wire rope--Oct., p. 39
Right and wrong ways of operating shovel air brakes--Oct., p. 41
Pull'em in for repairs--Nov., p. 53
Care of masonry saws adds to their life and cuts blade costs--Nov., p. 55
Here's advice on winterizing diesel engines--Nov., p. 59
Parts on pallets--Dec., p. 51

MANAGEMENT

Construction forecast-1963--Jan., p. 26
A better way to pay-rate scrapers--Jan., p. 84
A PE looks at bidding--Feb., p. 117
Colorado department charts working days--Feb., p. 130
Contractors put computors to work--Mar., p. 60
AGC ponders these problems; excess capacity; intense competition;low profits high business failure rates--Apr., p. 65
Booklet makes friends for freeway contractor--May, p. 46
Diagram the dirt for more accurate estimating better field supervision--May, p. 92
Profit Reports - 1963--June, p. 21
Safety at the Narrows--June, p. 80
How to figure your maintenance, repair costs--June, p. 84
Computers and the small contractor--June, p. 92
PR perks up the profits and prestige--June, p. 106
Safety is by-product of good maintenance--July, p. 57
Work starts on first Alaska job using CPM (Elmendorf, AFB)--July, p. 71
Have you checked your (insurance) coverage lately--July, p. 102
Rocket test-stand job demands CPM scheduling--Aug., p. 12
An expert tells how to figure labor cost and worktime--Aug., p. 90
The Critical Path Method -How to use it--Sept., p. 84

MANAGEMENT (cont.)

Equipment rental - how and when it pays--Oct., p. 88
Earthmoving Supervision - from a helicopter--Nov., p. 20
Contracts - the type can mean profit or loss--Nov., p. 75
Highway contracts: Book vs. job specifications--Dec., p. 76

PAVING, BITUMINOUS

Hot-mix resurfacing beefs up AFB runway (Elmendorf AFB)--Feb., p. 38
Lubrication for hot-mix spreads: keep it simple--June, p. 54
Hard grade asphalt for rural highway--June, p. 62
Pickup mac ine delivers windrowed mix to paver--Aug., p. 52
Flexible paving job beats time schedule--Oct., p. 106
Stabilized base 5 inches thick bridges poor subsoil--Dec., p. 46

PAVING, CONCRETE

Slip-form pavers - 19 feet long--Jan., p. 40
Tilting mixers eliminate batch trucks and pavers--Feb., p. 28
Modified side forms, rotating tube finisher aid slip-form paving job--Mar., p. 82
Slip form machine paves three lanes in one pass--July, p. 64
Big resurfacing job handled with epoxy cement--Sept., p. 22
Paver attachment cuts diagonal joints, places plastic strips--Sept., p. 36

PIPELINES

Self-propelled rig lines, finishes pipe--May, p. 66
Steel-pipe underdrains stabilize depressed highway--May, p. 112

PRESTRESSED AND PRECAST CONCRETE

Pre-glazed concrete panels cut exterior-wall costs--Jan., p. 80
Shells form sunshade for new medical center--Feb., p. 128
Checkerboard seawall saves beaches--Feb., p. 132
The St. Louis Gateway Arch--May, p. 10
Hydraulic clamp protects cylinder piles--May, p. 20
Slip form machine casts bridge piles--May, p. 32
HP shells to cover Puerto Rican stadium--May, p. 116
Big square pile wins out--July, p. 90
Miami firm finds no difficulty in producing 36-inch piles--July, p. 106
Columns, floor, roof walls are prestressed in tall building--Aug., p. 24
Precast roof and wall units speed construction of shopping center--Sept., p. 46

TUNNELS

Ammonium nitrate blasts dam tunnels--Jan., p. 46